Amendment to the Claims

Below is a complete listing of the claims.

1. through 41. Cancelled.

42. (Currently amended) A method, performed by an apparatus, the apparatus for interfering with locomotion of a target by conducting a current through the target, the method comprising:

providing a first pulse of the current, the first pulse having a first voltage;

monitoring the provision of the first pulse; and

providing a second pulse of the current, the second pulse having a second voltage, the second voltage responsive to a result of monitoring and sufficient to ionize air in a gap in series with the target.

43. (Previously presented) The method of claim 42 wherein monitoring comprises determining whether a charge greater than a threshold amount was output from the apparatus during provision of the first pulse.

44. (Previously presented) The method of claim 42 wherein monitoring further comprises determining whether the current was provided into an impedance having a magnitude less than a threshold amount.

45. (Previously presented) The method of claim 42 wherein monitoring further comprises determining whether the current accomplished ionization of air in a gap in series with the target.

46. (Previously presented) The method of claim 42 wherein:

providing the first pulse comprises storing energy in a capacitance; and

monitoring further comprises detecting a decrease in an energy stored in the capacitance.

47. through 49. Cancelled

50. (Previously presented) The method of claim 42 wherein providing the first pulse comprises providing the first voltage sufficient to ionize air in a gap in series with the target.

51. (Previously presented) The method of claim 42 wherein the first voltage is a peak voltage.

52. (Previously presented A method, performed by an apparatus, the apparatus for interfering with locomotion of a target by conducting a current through the target, the method comprising:

using a first voltage to test whether a path exists, the path having an impedance less than a threshold, the path to provide the current;

if the path exists, providing the current, the current having a second voltage not greater than the first voltage; and

otherwise, using a third voltage to provide at least a portion of the current, wherein the third voltage is sufficient to form the path.

53. (Previously presented) The method of claim 50 further comprising propelling a plurality of electrodes toward the target, the electrodes at least for testing the existence of the path.

54. (Previously presented) The method of claim 50 wherein using is repeated to obtain an average, the average indicating whether the path exists.

55. (Previously presented) The method of claim 50 wherein:

the method further comprises storing energy in a capacitance; and

using comprises sourcing the first voltage from the energy stored in the capacitance and detecting a decrease in the energy stored in the capacitance.

56. (Previously presented) An apparatus for interfering with locomotion of a target by conducting a current through the target, the apparatus comprising:

a circuit that provides the current, the current comprising a path testing stage and a first stage, wherein during the first stage the target's voluntary locomotion is halted as a consequence of contractions of the skeletal muscles of the target responsive to the current; and

a processor that controls the circuit, wherein at least a portion of the path testing stage is concurrent with at least a portion of the first stage.

57. (Previously presented) The apparatus of claim 56 wherein:

the current further comprises a path formation stage; and

at least a portion of the path testing stage is concurrent with at least a portion of the path formation stage.

58. (Previously presented) The apparatus of claim 56 wherein:

the current further comprising a second stage;

a first power consumption of the first stage is greater than a second power consumption of the second stage; and

at least a portion of the path testing stage is concurrent with at least a portion of the second stage.

59. (Previously presented) The apparatus of claim 56 wherein the circuit comprises a capacitance, and the current is responsive to a discharge of the capacitance.

60. (Previously presented) The apparatus of claim 56 wherein the circuit provides the current at a voltage in a range of about 100 volts to about 50,000 volts.

61. (Previously presented) The apparatus of claim 56 wherein path testing stage has a duration in a range of about 10 microseconds to about 500 microseconds.

62. (Previously presented) The apparatus of claim 56 wherein the circuit provides the current comprising a plurality of pulses, wherein each pulse of the plurality of pulses comprises a path testing stage.

63. (Previously presented) The apparatus of claim 62 wherein a pulse comprises current of both polarities.

64. (Previously presented) The apparatus of claim 56 wherein the processor meters a charge of the current.

65. (Previously presented) The apparatus of claim 64 wherein the processor interrupts the first stage in response to determining that the path has failed.

66. (Previously presented) The apparatus of claim 64 wherein the charge is in a range of about 50 microcoulombs to about 150 microcoulombs.

67. (Previously presented) The apparatus of claim 56 wherein the path testing stage is substantially accomplished at a stimulus peak voltage.

68. (Previously presented) The apparatus of claim 67 wherein the stimulus peak voltage is in a range of about 100 volts to about 50,000 volts.

69. (Previously presented) The apparatus of claim 56 wherein the path testing stage is substantially accomplished at a first voltage and the first stage is substantially accomplished at a second voltage.

70. (Previously presented) The apparatus of claim 69 wherein the first voltage is greater than the second voltage.

71. (Previously presented) The apparatus of claim 69 wherein the first voltage is less than the second voltage.

72. (New) A method, performed by an apparatus, the apparatus for interfering with locomotion of a target by conducting a current through the target, the method comprising:

providing a first pulse of the current, the first pulse having a first voltage;

monitoring the provision of the first pulse; and

providing a second pulse of the current, the second pulse having a second voltage, the second voltage responsive to a result of monitoring and greater than the first voltage.

73. (New) The method of claim 72 wherein monitoring comprises determining whether a charge greater than a threshold amount was output from the apparatus during provision of the first pulse.

74. (New) The method of claim 72 wherein monitoring further comprises determining whether the current was provided into an impedance having a magnitude less than a threshold amount.

75. (New) The method of claim 72 wherein monitoring further comprises determining whether the current accomplished ionization of air in a gap in series with the target.

76. (New) The method of claim 72 wherein:

providing the first pulse comprises storing energy in a capacitance; and

monitoring further comprises detecting a decrease in an energy stored in the capacitance.